



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

MAR 11 2003

MEMORANDUM

SUBJECT: Request a Ceiling Increase for the Time Critical Removal Action at the El Paso County Metals Removal Site, El Paso, El Paso County, Texas and Request an Exemption from both the \$2 Million and the 12-Month Statutory Limit

FROM: *for* Myron O. Knudson, P.E., Director
Superfund Division (6SF) *Myron O. Knudson*

TO: Marianne L. Horinko, Assistant Administrator
Office of Solid Waste and Emergency Response (5101T)

THRU: Michael B. Cook, Director *Michael B. Cook*
Office and Emergency and Remedial Response (5201G)

ATTN: Mark L. Mjoness, Director
Emergency Response Center (5204G)

I. PURPOSE

The purpose of this Action Memorandum is to request an increase of the total project ceiling beyond the \$2 million statutory limitation and an exemption to the 12-month time limit for a Removal Action pursuant to Section 104 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9604, described herein for the El Paso County Metals Removal (Site) area located in the City of El Paso, El Paso County, Texas. The removal action proposes to remove contaminated arsenic and/or lead soils found on residential properties.

In order to support the increase in the total project ceiling and the exemption from the \$2 million limit and 12-month statutory limit, this memorandum is also to request your concurrence on our findings that continued removal actions under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA) Section 104, 42 U.S.C. Section 9604, are otherwise appropriate and consistent with potential remedial actions to be taken and to avoid a foreseeable threat to human health.

This action meets the criteria for initiating a removal action pursuant to the National Contingency Plan (NCP), 40 CFR § 300.415, and the criteria for a \$2 million exemption under Section 104 of CERCLA, 42 U.S.C. Section 9604 (c). This action is anticipated to require more than twelve months and more than \$2 million for completion.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID#: TX0000605388

Category of Removal: Time-Critical

Site ID#: LP

A. Site Description

1. Removal site evaluation

On July 10, 2002, the Environmental Protection Agency (EPA) Region 6 Superfund Division Director signed the first Time Critical Action Memorandum (AM) for the El Paso County Metals Survey Site, El Paso, El Paso County, Texas, see Attachment 3. This AM proposed to remove/excavate contaminated arsenic and/or lead soils found on residential properties exceeding established screening levels of 24 parts per million (ppm) for arsenic and 500 ppm for lead, restore the property to the condition it was prior to the removal and arrange for the off-site disposal of the removed soils. All three of the actions initially approved [removal/excavate soils, restore property, and final off-site disposal of the excavated soils] started on November 13, 2002, and are currently on-going.

The Site, which extends throughout the west side of the City of El Paso, has a significant number of residential properties. The American Smelting and Refining Company (a.k.a. ASARCO) is located within the city limits of the City of El Paso. Please refer to the previous Action Memorandum dated July 10, 2002, [see Attachment 3] for a description of ASARCO's operations and history in El Paso. Sampling performed since the date of the previous Action Memorandum has assisted the EPA in further defining the Site. However, further sampling is still needed to determine the extent of contamination.

Since the date of the previous Action Memorandum, the EPA has been conducting a site assessment, has sampled many additional properties and is still in the process of further sampling to define the Site. According to the sampling results and projections, as of the writing of this AM, the site's range is approximately 1,050 residential properties.

2. Physical location

The exact location of the approximately 1,050 residential properties is known as of the writing of this AM, but the EPA still has additional properties to sample, and not all soil samples collected from residential properties have been analyzed and had laboratory data packages validated.

3. Site characteristics

The Site consists of residential properties contaminated with arsenic and/or lead throughout the west side of the City of El Paso, El Paso County, Texas. Further sampling is needed to determine the number and extent of contamination. According to sampling results already obtained and projections from the sampling, the Site's range is approximately 1,050 residential properties. This projection of residential properties requiring excavation is based on

using a screening level for arsenic at 24 ppm and/or lead at 500 ppm.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant.

Several previous investigations have been conducted to determine if high concentrations of metals are prevalent in soils throughout the City of El Paso. These investigations were conducted by the former Texas Air Control Board (TACB) and numerous environmental investigations associated with individual master theses from students at the University of Texas at El Paso (UTEP). These investigations identified elevated concentrations of metals in soils throughout areas of El Paso.

Based on these early investigations and a request from the local officials and State Senator Eliot Shapleigh, the EPA conducted an initial soil screening investigation of El Paso schools and parks in early July 2001 to determine if the data from UTEP were reproducible. At that time, air and soil samples were collected from numerous areas throughout the city. Based on these results, EPA determined that several areas warranted further investigation. Air sampling indicated the levels of metals in dust samples were higher than in some other areas of the city. Lead and arsenic are hazardous substances as defined at CERCLA § 101(14), 42 U.S.C. § 9601(14), and listed at 40 C.F.R. § 302.4.

On July 11, 2002, the Texas Department of Health (TDH), under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR), finalized the Health Consultation for the El Paso County Metal Survey, El Paso, El Paso County, Texas [see Attachment 2]. The EPA requested this Health Consultation to determine the public health significance of lead and/or arsenic found in surface soil samples. The health consultation reviewed sample laboratory results, consisting of 318 soil samples collected from 191 different locations, during an EPA sampling effort between February and March 2002. Areas sampled included residential properties, schools, parks, day care facilities, and apartment complexes. For the residential properties, 223 soil samples were collected from 128 different properties. For residential properties, the EPA documented that the presence of grass in the yards varied with approximately 44% of the yards being described as having less than 50% ground cover. The health consultation further concluded that there were 29 samples greater than or equal to the screening level of 500 ppm for lead from 24 residential properties and 65 samples were greater than or equal to the screening level of 20 ppm for arsenic from 44 residential properties. Based on available information, TDH concluded that exposure to lead and arsenic at some of these residential properties could pose an unacceptable public health hazard to children. Based on ATSDR's public health conclusion categories, TDH has categorized this Site as a public health hazard. The health consultation further states that, "The conclusions reached in this consultation are, to a large extent, based on conservative assumptions with respect to protecting public health...Soil availability, individual habits, and bioavailability are all factors that could affect the true public health significance of the lead and arsenic in the soil." A bioavailability study is being performed to determine the absorption rate of arsenic by the human body. The bioavailability study started in December 2002, and a final report is scheduled to be completed during the Spring of 2003. Upon completion and review of the bioavailability study results, the EPA will consult with ATSDR and TDH to determine if a different cleanup level is

recommended for arsenic.

5. NPL status

The EPA is in the process of evaluating this Site for possible National Priority Listing (NPL) inclusion. The Texas Commission on Environmental Quality (TCEQ) has stated that it would support proposing this Site. A draft Hazard Ranking Site (HRS) package has been prepared and submitted to EPA headquarters. This package clearly demonstrates that the Site is eligible for NPL inclusion. EPA is planning to continue the listing process for this Site. Based on current information, EPA believes that a remedial action will be necessary to address all remaining contaminated properties above health-based screening levels.

B. Other Actions to Date

1. Previous actions

Please refer to the previous Action Memorandum dated July 10, 2002. [see Attachment 3]

2. Current actions

Since July 10, 2002, the EPA has mailed approximately 2,200 requests for access agreements to area residential property owners, to complete the extent of contamination Site assessment. As of January 15, 2003, the EPA has received approximately 2,020 signed access agreements, and of these, the EPA has sampled approximately 1,900 properties. Of the 1,900 properties sampled, the EPA has received validated laboratory results on approximately 1,843 properties, and of these, approximately 1,050 are above the screening values of 24 ppm for arsenic and/or 500 ppm for lead (with 83 properties over 60 ppm arsenic and 39 properties over 1,500 ppm lead). The validated laboratory results reveal levels as high as 150 ppm for arsenic and more than 4,000 ppm for lead. Based on the number of property owners who grant EPA access and the levels of arsenic and/or lead found within the top two feet of the properties sampled, the EPA is determining which properties are potential candidates for a removal action. More specific details on the selection of properties, and how a specific property removal action will take place are discussed later in this AM under Section VI., Proposed Actions and Estimated Costs.

During September 2002, the EPA Emergency Response Removal Services (ERRS) contractor conducted a Site walk with the EPA On-Scene Coordinator (OSC) and submitted a work plan to the OSC for review. The EPA OSC has reviewed and approved the work plan submitted by the ERRS contractor. During October 2002, the ERRS contractor negotiated a lease for a command post, awarded a subcontract to a local restoration company and arranged for the off-site transportation and disposal of the excavated soils. On November 13, 2002, the EPA started the field removal actions by excavating contaminated soils from the first property. Since that date, the removal action has continued by implementing the actions initially approved in the first AM, which are to remove/excavate contaminated soils, restore the property, and final disposal off-site of excavated materials.

C. State and Local Authorities' Roles

1. State and local actions to date

State and local officials have provided technical review and support of EPA investigations at the Site. The TDH has reviewed data from these investigations and has provided a health consultation in coordination with ATSDR. The TCEQ has requested Federal assistance to deal with the elevated metal concentrations found in the El Paso area.

2. Potential for continued State/local response

State and local governments have requested Federal assistance due to lack of their resources. The State through the TCEQ will contribute 10% of any removal action conducted by the EPA.

**III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT;
STATUTORY AND REGULATORY AUTHORITIES**

A. Threats to Public Health or Welfare

Conditions at the Site meet the following factors, which indicate that the Site is a threat to the public health, welfare and the environment and that a removal action is appropriate under Section 300.415(b)(2) of the NCP.

1. Actual or Potential Exposure to Human Populations, Animals or the Food Chain to Hazardous Substances , Pollutants, or Contaminants, NCP Section 300.415(b)(2)(i) and Contaminants in Soil, NCP Section 300.415(b)(2)(iv).

In accordance with Sections 300.415(b)(2)(i) and 300.415(b)(2)(iv) of the NCP, the EPA has determined that there exists the potential for exposure of human populations, animals, or the food chain to hazardous substances through direct contact with soil contaminated with lead and/or arsenic.

Many of the site residential properties have desert-type landscaping with large amounts of exposed soil. Potential inhalation exposures may occur during frequent high wind events. Potential ingestion exposures may occur during outdoor play of young children from hand to mouth activities or contaminated play toys. Several high blood lead levels have also been reported in children.

Lead and arsenic constitute hazardous substances as defined at Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and further listed at 40 C.F.R § 302.4. Health effects are also well documented in general toxicological literature.

According to HHS and the ATSDR, the following health effects are associated with

exposure to lead:

Exposure to lead is particularly dangerous to unborn and young children. Lead can affect virtually every system in the body and is particularly harmful to the developing brain and nervous system of fetuses and young children. Unborn children can be exposed to lead through their mothers' circulatory systems, exposure which may cause premature births, smaller babies, and decreased mental ability in the infant. Severe lead exposures in children can cause coma, convulsions, and even death. Lower levels of lead exposure can cause adverse effects on the central nervous system, kidney, and hematopoietic system. Blood lead levels as low as 10 milligrams per deciliter (ug/dL), which would not cause distinctive symptoms, are associated with decreased intelligence and impaired neurobehavioral development. Many other effects begin at low levels including decreased stature or growth, decreased hearing acuity, and decreased ability to maintain a steady posture.

In adults, lead exposure may decrease reaction time and possibly affect the memory. Lead exposure may also cause weakness in fingers, wrists, or ankles. Finally, lead exposure may cause high blood pressure, anemia, brain and kidney damage, miscarriages, and damage to the male reproductive system.

According to the HHS and the ATSDR, the following health effects are associated with exposure to arsenic:

Arsenic primarily enters the body through ingestion or inhalation as airborne dust. Arsenic and arsenic compounds are considered skin and lung carcinogens in humans and high levels of ingested arsenic are known to produce death. Ingestion of arsenic could also cause irritation of stomach and intestines, nerve injury, and possible liver damage. Common side effects include decreased production of red and white blood cells, abnormal heart rhythm, impaired nerve function such as feeling pins and needles sensation in hands. Studies in animals indicate those doses of arsenic sufficient to impact pregnant female's also cause low birth weight, fetal malformations, or death. Oral ingestion causes skin pattern changes such as warts, moles, and corns that may develop into skin cancer. Inhalation of arsenic dust may cause irritated lungs but more significantly increased lung cancer has been associated with the exposure.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the action selected in this action memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. CRITERIA FOR AN CONSISTENCY EXEMPTION FROM STATUTORY LIMITS

Section 104 of CERCLA, 42 U.S.C. § 9604, vests the authority to conduct the removal action described in this memorandum, and the authority to make the findings necessary to obtain

the relevant statutory exemptions, in the President of the United States. The authority to authorize the relevant CERCLA Section 104 exemptions for a removal action was delegated to the EPA Administrator by Executive Order Number 12580, January 23, 1987, 52 Fed. Reg. 2923, and was redelegated to the Assistant Administrator for Solid Waste and Emergency Response (AA/OSWER) and Regional Administrators by EPA Delegation Number 14-2 (November 8, 2001). That authority was in turn redelegated to the Director, Superfund Division, EPA Region 6, by EPA Region 6 Delegation Number R6-14-2 (March 21, 2002). However, the redelegation gives the specific authority to approve the use of the consistency waiver for removal actions at sites not proposed to or final on the NPL to only the AA/OSWER.

The Site meets the prescribed criteria for the \$2 million and 12-month time limit exemption as follows:

Continued response actions are otherwise appropriate and consistent with remedial action to be taken and to avoid a foreseeable threat.

Since the signing of the current AM on July 10, 2002, the EPA has received validated laboratory results from approximately 1,843 residential properties and has determined that approximately 1,050 properties exceed the EPA and TCEQ screening levels of 500 ppm for lead and/or 24 ppm for arsenic (with 83 properties over 60 ppm arsenic and 39 properties over 1,500 ppm lead). Due to the large number of residential property soil sample results that exceed the screening levels, the removal costs will exceed the current \$2 million ceiling. At the time of the signing of the original AM the number of properties in need of a removal action was not known.

The actions proposed within this AM are appropriate, consistent and do not hinder any additional conceivable future remedial actions to be taken. Based on current knowledge of the Site conditions, this Site would meet the criteria for NPL listing. The actions proposed in this AM will prevent direct human contact with the contaminated soils. While the bioavailability study is ongoing to determine a final cleanup level for arsenic, EPA is removing the soil at the properties with the highest contamination levels of arsenic and/or lead, thereby addressing first the greatest risks to human health. Properties with contamination above 1500 ppm lead and/or 80 ppm arsenic will be addressed as part of this first tier of cleanup actions. In addition to these higher contamination levels, properties with little or no vegetative cover, properties with children 0 to 9 years old, and properties with pregnant or nursing women will also be given elevated priority. The second tier would address properties with contamination above 60 ppm arsenic. Approximately 83 properties have contamination over 60 ppm arsenic and 39 properties over 1,500 ppm lead. The actions proposed within this AM will also contribute positively to future remedial actions because they will reduce the total number of potential properties that would require excavation under the remedial program. If this AM is approved, the additional funds will be used to perform removal actions on as many residential properties as possible. These additional funds should be enough to address the remaining properties above 60 ppm arsenic and/or 1,500 ppm lead.

This site is a NPL caliber site, a draft HRS package has been prepared and submitted to headquarters that demonstrates this site's eligibility for NPL inclusion, furthermore the TCEQ has stated that they would support NPL inclusion of this site. This site is similar to other smelter sites currently on the NPL and the proposed actions set forth in this AM are consistent with

remedial actions being taken at this type of site nationwide. Continuation of this removal action will significantly reduce “public health hazards” to children and residents with unacceptable arsenic and lead values in their residential yards by eliminating the direct human contact with the contaminated soils. The EPA believes that a remedial action will be necessary to address all remaining contaminated properties above health-based screening levels.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

To initiate actions on specific residences, right of entry access from the owners will be obtained in the form of a consensual access agreement. All residential properties will be thoroughly documented and certain engineering measurements will be taken prior to any soil excavation. The documentation process will entail photographing, video taping, and written descriptions of all details of the property. Details to be established and/or documented may include from the following list: elevation of foundations, working condition of utilities, shrubbery and landscaping details, outside conditions of walls, condition of inside walls, location and condition of sidewalks and driveways, together with any unique items such as gardens or tools/lawn sheds or any other details necessary to return the residence to its original condition prior to the removal being performed. Prior to excavation, residents will be provided and agree to a restoration agreement detailing where the contaminated soils will be removed from their property and how the EPA will restore the property.

Excavation at homes will be based upon laboratory data exceeding established screening levels of 24 ppm for arsenic and/or 500 ppm for lead. After the initial excavation of the upper most contaminated layers, confirmation sampling will be performed to document and determine if all contamination has been excavated to below the screening levels. This procedure will continue until the excavated areas are either below the established screening levels or until a maximum depth of 2 feet has been obtained. A tiered approach will be utilized to address highest health threat properties first. As stated above, properties with contamination above 1500 ppm lead and/or 80 ppm arsenic will be addressed as part of this first tier of cleanup actions. In addition to these higher contamination levels, properties with little or no vegetative cover, properties with children 0 to 9 years old, and properties with pregnant or nursing women will also be given elevated priority. The second tier would address properties with contamination above 60 ppm arsenic. Approximately 83 properties have contamination over 60 ppm arsenic and 39 properties over 1,500 ppm lead. The actions proposed within this AM will also contribute positively to future remedial actions because they will reduce the total number of potential properties that would require excavation under the remedial program. If this AM is approved, the additional funds will be used to perform removal actions on as many residential properties as possible. These additional funds should be enough to address the remaining properties above 60 ppm arsenic and/or 1,500 ppm lead.

Concrete areas, such as, driveways and sidewalks may be removed and replaced, at the discretion of the On-Scene Coordinator (OSC), if it is determined to be cost effective. Due to labor costs, detailed work around concrete is extremely costly compared to replacement cost;

therefore, significant areas of concrete may be removed to expedite the removal action. Similarly, utility lines may be removed and temporarily relocated during excavation activities. The utilities will be properly replaced in accordance with city codes prior to backfilling. Care will be taken to minimize utility down time during transfer to temporary utility lines. Temporary sidewalks will be installed to allow continued access to residences, thus eliminating the need for temporary relocation of residents during the action. The yards will then be backfilled to original elevations and returned to the condition as stated in the restoration agreement. This may entail replacing concrete, landscaping, and restoring fences and other items such as garden sheds. If it is necessary to remove large trees, they will be replaced with the best similar variety, which is practical and commercially available. A final walk through with the owner will be performed to ensure that proper restoration has occurred to the owner's satisfaction.

During soil excavation operations, air sampling and/or monitoring will be conducted to insure that potentially contaminated soil/dust does not impact the community or the adjacent properties and that engineering controls are adequate. Visible airborne soils/dust will be considered above acceptable levels. All initial properties will have the ambient air sampled/monitored during excavation operations by using a combination of high-volume Total Suspended Particulate (TSP) air samplers, and/or air monitors. Sampling will be consistent with methods specified by the National Ambient Air Quality Standards for Total Suspended Particulate Matter and lead 40 CFR Part 50, Appendices B and G. Samples collected by this method will be sent to an off site laboratory and analyzed for arsenic and lead. Additionally, air monitoring for respirable particulate (dust) will be performed at the upwind and downwind perimeter of the exclusion area. A mini-RAM PDM-3, or equivalent, portable aerosol monitor will be used for this task. The OSC will identify appropriate action levels for implementation of additional engineering controls, ceasing or modifying existing operations.

2. Contribution to remedial performance

The selected response contributes to any additional conceivable future remedial action by preventing direct human contact with the contaminated soil. This will eliminate the direct contact pathway to hazardous substances found in the Site's surface and subsurface soils.

3. Description of alternative technologies

The proposed removal actions stated in this AM will eliminate direct human contact with surface soils at the Site efficiently and effectively. No other cost effective alternative exists.

4. Applicable or relevant and appropriate requirements (ARAR's)

The proposed removal action will be conducted to eliminate the actual or potential release of a hazardous substance, pollutant or contaminant pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9601 *et seq.*, and in a manner consistent with the National Contingency Plan, 40 C.F.R. Part 300. As per 40 C.F.R. § 300.415(i), fund-financed removal actions under CERCLA § 104, 42 U.S.C. § 9604,

and removal actions pursuant to CERCLA § 106, 42 U.S.C. § 9606, generally will attain the applicable or relevant and appropriate requirements under Federal environmental law. Due to the fact that excavations of residential properties and the off-site disposal of contaminated soils are the principal elements of this removal action, RCRA waste analysis requirements found at 40 CFR § 261.2 and 261.3, RCRA manifesting requirements found at 40 CFR § 262.20 and transportation will be in accordance with Department of Transportation rules and regulation 40 CFR § 263.

B. Estimated Costs

	Current Ceiling	Costs To Date	Proposed Ceiling
<u>Extramural Costs</u>			
Clean up contractor (ERRS)	\$1,300,000	\$ 825,000	\$4,200,000
START.....	\$ 450,000	\$ 175,000	\$1,000,000
Subtotal Project Ceiling.....	\$1,750,000	-0-	\$5,200,000
Removal Costs Contingency (15%).....	\$ 240,000	-0-	\$ 800,000
TOTAL REMOVAL PROJECT CEILING.....	\$1,990,000	\$1,000,000	\$6,000,000

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Should the action described in this AM be delayed or not taken, the potential exposure of nearby human populations to hazardous substances found in the surface and subsurface soils will remain unabated. If the ceiling is not increased, the removal action would cease within three weeks and thousands of people, including hundreds of children and other sensitive populations, would continue to be exposed to hazardous substances, with potential for health effects as described in Section III.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues associated with this Site.

IX. ENFORCEMENT

For administrative purposes, information concerning confidential enforcement strategy for this Site is contained in the Enforcement Confidential Attachment #1. The total for this

removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$7,698,513.

(Direct Cost) + (Indirect Cost) = Estimated EPA Costs for a Removal Action

$$(\$6,000,000 + \$125,000) + (25.69\% \times \$6,125,000) = \$7,698,513$$

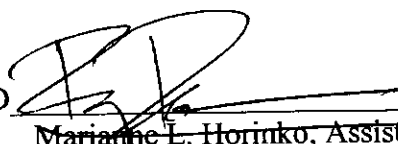
Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of Site specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgement interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

X. RECOMMENDATION

This decision document represents the selected removal action for the El Paso County Metals Removal Site in El Paso, El Paso County, Texas, developed in accordance with CERCLA, as amended, and consistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at the Site meet the criteria as defined by Section 300.415(b)(2) of the NCP, 40 C.F.R. § 300.415(b)(2), for a removal, and the CERCLA Section 104 (c) consistency exemption from the \$2 million limitation and exemption from the twelve-month statutory limit for removals, and I recommend your approval of the proposed removal action and the \$2 million exemption and twelve month exemption. The total project ceiling, if approved, will be \$6,000,000. An estimated \$4,200,000 comes from the Regional removal allowance.

APPROVED



DATE 3/20/03

~~Marianne L. Horinko, Assistant Administrator
Office of Solid Waste and Emergency Response (5101T)~~

Barry Breen, Principal, OSWER,
pursuant to re-delegation.